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Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

WHAT IS CLAIMED IS:

1-11. (canceled)

12. (currently amended) A gas turbine blade for a fourth stage and onward of a multi-stage turbine, the blade comprising:

a metallic root portion;

a platform portion; and

an airfoil portion comprising at least a structural ceramic material for bearing a tensile load to oppose a centrifugal force that develops during rotation of the blade, wherein the root, platform and airfoil are collectively comprised of a plurality of materials in which at least 40% by volume of the materials comprise the structural ceramic material having ~~have~~ a density of at most 4 g/cm^3, wherein the density by volume provided by the plurality of materials allows providing a length of at least 50 cm for a blade disposed in the fourth stage and onward of the multi-stage turbine.

13. (previously presented) The turbine blade as claimed in claim 12, wherein the turbine blade is arranged in a metallic rotor disk.

14. (previously presented) The turbine blade as claimed in claim 12, wherein the turbine blade has a structural metallic core surrounded by a structural ceramic material.

15. (previously presented) The turbine blade as claimed in claim 14, wherein the metallic core is formed at least in part from a metallic foam.

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16. (previously presented) The turbine blade as claimed in claim 12, wherein the ceramic material has a non structural ceramic protective layer arranged over the ceramic material.

17. (cancelled).

18. (previously presented) The turbine blade as claimed in claim 17, wherein the length of the turbine blade is at least 65 cm.

19. (previously presented) The turbine blade as claimed in claim 12, wherein the turbine blade has a metallic skeleton material that functions as a structural frame and is adapted to support a structural ceramic material.

20. (previously presented) The turbine blade as claimed in claim 12, wherein the materials are a ceramic material or a glass material.

21. (previously presented) The turbine blade as claimed in claim 12, wherein the material with the density of at most 4 g/cm^3 is a carbon-containing material.

22. (cancelled)

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23. (currently amended) A turbine blade for a fourth stage and onward of a multi-stage turbine, the blade comprising:

a root portion connected to a rotor disk;

~~a tip portion~~ an airfoil having a first section located adjacent to the root portion, wherein the first section comprises a material having a first density, the airfoil ~~tip portion~~ having a second section located adjacent to the first section consisting exclusively of an structural ceramic material having a second density different than the first density and extending at least 80% of the length of the tip portion, wherein the structural ceramic material bears a tensile load to oppose a centrifugal force that develops during rotation of the blade, wherein at least 40% by volume of the first and second sections comprise the structural ceramic material having ~~have~~ a density of at most 4 g/cm^3, wherein the density by volume achieved over the first and second sections of the airfoil ~~tip portion~~ allows providing a length of at least 50 cm for a blade disposed in the fourth stage and onward of the multi-stage turbine.

24. (currently amended) A gas turbine blade for a fourth stage and onward of a multi-stage turbine, the blade comprised of at least one material in which at least 40% by volume of the material has a density of at most 4 g/cm^3, wherein the density by volume achieved by the at least one material allows providing a length of at least 50 cm for a blade disposed in the fourth stage and onward of the multi-stage turbine, wherein the at least one material bears a tensile load to oppose a centrifugal force that develops during rotation of the blade.

25. (previously presented) The turbine blade as claimed in claim 24, wherein the turbine blade has a metallic skeleton into which ceramic parts are introduced.

26. (previously presented) The turbine blade as claimed in claim 24, wherein the material with the density of at most 4 g/cm^3 is a ceramic material or a glass material.

27. (previously presented) The turbine blade as claimed in claim 24, wherein the material with the density of at most 4 g/cm^3 is a carbon-containing material.

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28. (previously presented) The turbine blade as claimed in claim 24, wherein the turbine blade has a metallic core surrounded by a ceramic material, the metallic core and ceramic material both adapted to provide structural support.

29. (previously presented) The turbine blade as claimed in claim 28, wherein the metallic core is formed at least in part from a metallic foam.

30. (previously presented) The turbine blade as claimed in claim 24, wherein the ceramic material has a protective layer.

31. (new) A gas turbine blade for a fourth stage and onward of a multi-stage turbine, the blade comprising:

a metallic root; and

a platform comprising a structural ceramic material mechanically interlocked with the root, the platform ceramic material extending radially to form an airfoil, wherein the ceramic material bears a tensile load to oppose a centrifugal force that develops during rotation of the blade.

32. (new) The turbine blade of claim 31 wherein the metallic root comprises one or more affixing ribs at a first portion in correspondence with the platform for establishing the mechanical interlocking with the platform.

33. (new) The turbine blade of claim 32 wherein the metallic root further comprises a second portion extending radially through a portion of the airfoil.

34. (new) The turbine blade of claim 33 wherein the structural ceramic material comprises a volume of at least 40% of the airfoil volume, including the metallic root second portion therein, thereby reducing blade weight to provide a length of at least 50 cm for a blade disposed in the fourth stage and onward of the multi-stage turbine.

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35. (new) A gas turbine comprising at least four stages of successively arranged turbine blades and vanes, wherein each stage comprises a row of rotor blades and a row of guide vanes, with the rotor blades having a metallic root part, wherein at least the fourth row of rotor blades comprises rotor blades in which at least 40% by volume of the material has a density of at most 4 g/cm^3, so that the mass is substantially reduced compared to a metallic rotor blade, wherein a minimum length of the rotor blades is 50 *cm* and further wherein at least beyond 80% of the length of a main blade section in a radial direction consists exclusively of ceramic.

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